

Department of Aeronautics and Astronautics Naval Postgraduate School

Faculty Vita

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Education:

Ph.D. Electrical Engineering Systems, University of Michigan (1992)
M.S. Electrical Engineering, University of Minnesota, Minneapolis (1985)
B.S. Electrical Engineering, University of Minnesota, Minneapolis (1983)

Related Experience (Teaching, Industrial, etc.):

Research Consultant, MARIUS Underwater Vehicle Project, Technical University of Lisbon, Lisbon, Portugal, 1990-1992
Graduate Research Assistant, Department of Electrical Engineer and Computer Science, University of Michigan, 1989-1992
Consultant, Boeing Commercial Airplanes Company, Seattle, WA, 1990-1991
Research Engineer, Boeing Commercial Airplanes Company, Seattle, WA, 1986-1989
Senior Engineer, Boeing Commercial Airplanes Company, Seattle, WA, 1985-1986

Institutional and Professional Service (Last 5 Years):

Co-organizer of 1996 Maritime Avionics Subsystems Technology Program Review sponsored by Naval Air Systems Command's AIR 4.5T. Held at NPS in May of 1996.
DoD reviewer and contract monitor for Unmanned Air Vehicles Joint Program Office of Phases of SBIR contract "Fault Tolerant Controls Research for UAVs".
Organizer and Chairman of the Invited Session *Motion Control of Autonomous Vehicles* at 1995 American Control Conference, June 1995, Seattle, WA.
Co-Chair of *Guidance, Navigation, and Control II* Session at 1997 AIAA GNC conference, New Orleans, August 1997.
Session Chair, 1998 and 1999 American Control Conference.
Topic Chair, 1999 AIAA Conference on Guidance, Navigation and Control.
Organizer, 1999 ONR Workshop on Autonomous Intelligent Agents, NPS, January 1999.
Reviewer for the following American and International Scientific Journals: IEEE Transaction on Automatic Control, IEEE Transactions on Control Technology, IFAC Automatica, AIAA Journal Guidance, Control and Dynamics International Journal of Nonlinear and Robust Control, Mathematics of Control, Signals and Systems.
Reviewer for the following American and International Conferences: American Control Conference European Control Conference, AIAA Conference on Guidance, Navigation and Control, IEEE Conference on Decision and Control.

Honors and Awards:

1995 ASEE/NASA Summer Faculty Fellowship.
1995 NATO Fellowship for Scientific and Technological Exchange.
1999 AIAA Outstanding Service Award.
1999 NPS Menneken Annual Faculty Award for Excellence in Scientific Research
NATO Fellowship for Scientific and Technological Exchange, 1994
NASA Certificate of recognition for the creative Development of a Technical Innovation, 1991

Scientific and Professional Society Membership:

Institute of Electrical and Electronic Engineers
American Institute of Aeronautics and Astronautics

Principal Publications (Last 5 Years):

- “Unmanned Aircraft Navigation for Shipboard Landing Using Infrared Vision, *Proceedings 2000 American Control Conference*, June 2000, Chicago (with O.A.Yakimenko, W.J.Lentz, and P.A.Ghyzel)
- “Performance, Control, and Simulation of the Affordable Guided Airdrop System,” *Proceedings 2000 AIAA Conference on Guidance, Navigation and Control*, August 2000, Denver (with S. Dellicker, T.Williams, C.Hewgley, O.Yakimenko, R.Howard, R.Benney, and S.Patel,
- “Integrated Vision/Inertial Navigation Systems Design Using Nonlinear Filtering”, *Proceedings 2000 Conference on Decision and Control*, Sydney Australia (with A. M. Pascoal, W. Kang, O. Yakimenko).
- “Control of Nonlinear Autonomous Systems using Passive Sensors”, ONR contractor report, September 2000.
- “Design of the Complementary, Time-Varying Filters using Linear Matrix Inequalities,” October 2000 issue of *IEEE Transactions on Aerospace and Electronics*, Vol. 36, No. 4, pp. 1099-1114 (with A. M. Pascoal and P. Oliveira).
- “Development of the Rapid Flight Testing System for Unmanned Air Vehicles,” *IEEE Control Systems Magazine*, pp. 55-56, February 1999 (with E. Hallberg and A.M. Pascoal).
- “On the Development of the Tail-Sizing Criteria for High Speed Civil Transport,” *AIAA Journal of Guidance, Control and Dynamics*, pp. 618-622, July-August 1999 (with E. Hallberg).
- “Trajectory Tracking for Autonomous Vehicles: An Integrated Approach to Guidance and Control,” *AIAA Journal of Guidance, Control and Dynamics*, pp. 29-38, 1998 (with A.M. Pascoal, E. Hallberg and C. Silvestre).
- “Closed Loop Pitch Control Effector Sizing,” *NASA Contractor Report*, 1998 (with P.W. Meade).
- “On Integrated Aircraft/Controller Design Using Linear Matrix Inequalities,” *AIAA Journal of Guidance and Control*, Vol. 19, No. 2, pp. 445-542, 1996 (with R.J. Niewhoener).
- “Navigation, Guidance and Control for AUVs: An Application to the MARIUS Vehicle,” *IFAC Journal of Control Engineering Practice*, Vol. 4, No. 3, pp. 401-409, 1996 (with D. Fryxell, P. Olivira, A. Pascoal, and C. Silvestre).
- “Design of an Autoland Controller for a Carrier Based F-14 Aircraft using H_∞ output Feedback Synthesis,” *AIAA Journal of Guidance and Control*, Vol. 19, No. 3, pp. 656-663, 1996 (with R.J. Niewhonener).